

Amendment dated December 3, 2008

Response to Office Action dated September 5, 2008

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Final Office Action dated September 5, 2008 has been received and its contents carefully reviewed.

Claims 28-31, 34-36, 38, 40-43, 46-48, 50-52, 54 and 56-58 are rejected. By this Amendment, claims 28, 29, 40, 41, 42 and 50 have been amended. Accordingly, claims 28-31, 34-36, 38, 40-43, 46-48, 50-52, 54 and 56-58 are currently pending. This Amendment is based on the original specification and Drawings. No new matter is added. Reexamination and reconsideration of the pending claims is respectfully requested.

Claims 28-30, 34-36, 40-42, 46-48, 50-51, 54 and 56-58 are rejected under 35 USC 103(a) as being over US patent No. 5,847, 690 (“**Boie et al.**”, hereinafter “Boie”) in view of US patent No. 6,762,752 (“Perski et al.”, hereinafter “Perski”) and further in view of US patent No. 5, 657,011 (“Komatsu et al.”, hereinafter “Komatsu”). Claims 31, 38, 43 and 52 are rejected under 35 USC 103(a) as being unpatentable over “**Boie**” in view of “**Perski**” in view of “**Komatsu**”, as applied in claim 28 and further in view of US Patent No. 6,630,274 (“**Kiguchi et al.**”, hereinafter “Kiguchi”). These rejections are respectfully traversed and reconsideration is requested.

Claim 28 is allowable over the cited references in that claim 28 recites a combination of features including, for example, “an EM sensor including first and second coil arrays formed of a transparent electrode on the second substrate, wherein each of the first and second coil arrays include a plurality of coils and each of the plurality of coils has first and second open ends and wherein the first coil array is perpendicular to the second coil array” and “a light-shielding layer and a color filter layer on the EM sensor corresponding to the pixel electrodes.”

Boie does not disclose the features of “an EM sensor including first and second coil arrays formed of a transparent electrode on the second substrate, wherein each of the first and second coil arrays include a plurality of coils and each of the plurality of coils has first and second open ends and wherein the first coil array is perpendicular to the second coil array” and

Amendment dated December 3, 2008

Response to Office Action dated September 5, 2008

“a light-shielding layer and a color filter layer on the EM sensor corresponding to the pixel electrodes.”

Referring to Figs. 2 and 3A, Boie shows the capacitive sensor is formed on the same layer with the black matrix layer or black matrix material in itself. The touch sensor in Boie does not anticipate ‘EM (Electro-Magnetic) sensor’ due to a difference of driving touch sensor. As evidence of EM touch sensor, the Examiner mentions the cited references of Perski and Komatsu in the Final Office Action. However, neither Perski nor Komatsu explicitly disclose at least the feature of “a light-shielding layer and a color filter layer on the EM sensor corresponding to the pixel electrodes.”

Further, neither Perski nor Komatsu shows that the EM sensor is formed in the LCD device. On the contrary, Komatsu explicitly shows that the EM sensor is formed below the LCD device. Accordingly, there is not proper motivation to apply the EM sensor of Komatsu or Perski in a capacitive type touch sensor of Boie, as suggested by the examiner.

Therefore, none of the cited references, singly or in combination, teaches or suggests the feature of the claimed invention. Accordingly, Applicants respectfully submit that claim 28 and claims 29-31, 34-36, and 38, which depend therefrom, are allowable over the cited references.

Claim 40 is allowable over the cited references in that claim 40 recites a combination of features including, for example, " an EM sensor including first and second coil arrays formed of a transparent electrode on the light-shielding layer and the color filter layer, wherein the first coil array is perpendicular to the second coil array" and “an overcoat layer on the EM sensor, wherein each of the first and second coil arrays include a plurality of coils, and each of the plurality of coils has first and second open ends.” For similar reasons as discussed above with respect to claim 28, none of the cited references, singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claim 40 and claims 41-43 and 46-48, which depend therefrom, are allowable over the cited references.

Claim 50 is allowable over the cited references in that claim 50 recites a combination of features including, for example, " an insulating layer on the thin film transistor array and the pixel electrodes" and “an EM sensor including first and second coil arrays formed of a

transparent electrode on the insulating layer, wherein each of the first and second coil arrays include a plurality of coils, and each of the plurality of coils has first and second open ends and wherein the first coil array is perpendicular to the second coil array.” In the device recited in claim 50, the EM sensor is on the insulating layer of the first substrate and the insulating layer is on the thin film transistor array and the pixel electrode.

Boie shows that the capacitive touch sensor is on the upper substrate. Generally, the capacitive touch sensor cannot be formed on the lower substrate having TFT array since the capacitive touch sensor only functions by change of capacitance when an input is applied to the upper substrate. Therefore, Boie does not disclose the feature of “an EM sensor including first and second coil arrays formed of a transparent electrode on the insulating layer on the thin film transistor array and the pixel electrodes, wherein each of the first and second coil arrays include a plurality of coils, and each of the plurality of coils has first and second open ends and wherein the first coil array is perpendicular to the second coil array. Neither Perski nor Komatsu does show the feature. Further, for similar reasons as discussed with respect to claim 28, none of the cited references, singly or in combination, teaches or suggests at least these features of the claimed invention. Accordingly, Applicants respectfully submit that claim 50 and claims 51-52, 54 and 56-58, which depend therefrom, are allowable over the cited references.

Applicants believe the application is in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911.

Please credit any overpayment to deposit Account No. 50-0911.

Dated: December 3, 2008

Respectfully submitted,

By: Valerie P. Hayes
Valerie P. Hayes
Registration No.: 53,005
McKENNA LONG & ALDRIDGE LLP
1900 K Street, N.W.
Washington, DC 20006
(202) 496-7500
Attorneys for Applicant